



**OPERATING &  
MAINTENANCE  
INSTRUCTIONS FOR  
EXTRACTION SYSTEMS**

## EXTRACTION SYSTEMS OPERATION AND MAINTENANCE

See table 1 (below) for cleaning frequencies.

### 1) EXTRACTION CANOPY CLEANING

Generally the extraction canopy will be manufactured from 430-Grade Dull Buff Stainless Steel or 304-Grade if specified.

To clean the stainless steel, we recommend a mild detergent with vinegar, which will remove light grease marks etc.

The grease collection trays at the bottom of the extraction plenum will collect any excess grease/oil. These cups will collect any waste material over a long period and should be checked at regular intervals (see table 1).

### 2) MESH TYPE AND BAFFLE TYPE GREASE FILTERS.

Both mesh and baffle type grease filters should be cleaned at regular intervals according to use (see table 1).

The filters will fit into a Commercial Dishwash Machine or alternatively can be placed in very hot water with a detergent overnight and washed out under a tap to clear grease. ***Do not use any caustic materials as this may damage the filters.***

### 3) FANS AND CONTROLS

Each extract / fresh air system fan is selected at design stage depending on the size of the canopy, the length and size of ductwork, the type of filtration system, and the type of cooking equipment being used.

***Any speed controllers fitted MUST be set at full speed on every occasion before the extract and air supply fans are switched on (see figure 1). Failure to do this may result in the fan motor burning out and the invalidation of any warranty on the fans.***



Fig 1 – Fan controls set at full speed

There is very little maintenance to fans and controllers required but fans should be checked periodically for cleanliness and heavy grease deposits which could, in time, increase system resistance and cause fans to fail. It is not possible to service a fan as they are sealed units but cleaning by a professional company if grease deposits build up will prolong its life.

#### 4) FRESH AIR INLET FILTERS

Dust filters (either in panel cartridge or bag form) are usually installed between the fresh air inlet and the supply fan. These should be inspected and cleaned or removed and replaced as necessary.

#### 5) GAS INTERLOCK

The system should be operated with the Engineers Test Key in the **vertical** position (see figure 2) and the Emergency Gas Shut Off (RED) button **out** (twist to release) The engineers key should be removed from the panel and stored in a safe place to prevent override of the safety systems by unqualified kitchen staff.

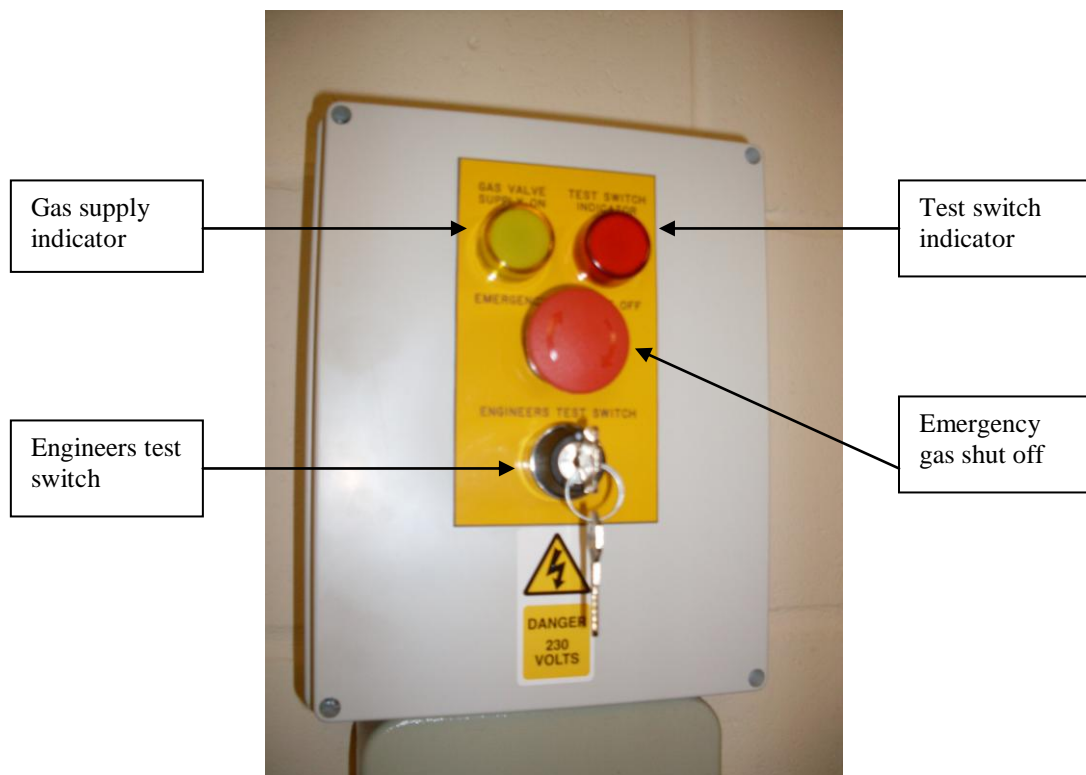


Figure 2 – Gas Interlock and proving panel

To start the system turn both speed controllers to full speed and switch each controller on. A differential air pressure switch is fitted to both the extraction ductwork and the fresh air supply ductwork. The interlock will not allow the gas to flow until a satisfactory level of air flow through the ductwork has been achieved. When the correct level is reached the yellow light will come on to show the gas valve has been activated. Only at this point will the gas supply to the appliances become available for use.

When turning down the fan speeds to the preferred operating speed you will find there is a minimum fan speed below which the interlock will activate and the gas supply will automatically be shut off (and the yellow light goes off).

If the yellow light does not come on:

- ensure fan(s) are set on full speed
- check that the red emergency gas button has not been pushed in
- check you have power to the unit.
- check that you have allowed enough time for the interlock system to monitor the air pressure (normally no more than a few minutes).

The Engineers Test Switch must only be activated (i.e. put into horizontal key position – red light comes on) by the person responsible for the kitchen and only after an assessment of risks to staff and customers on the premises has been carried out. Using this switch allows gas to flow (and cooking to continue) even when the extraction system has failed i.e the safety system is overridden. Prolonged use of the system under these conditions should be referred to BW Fabrications Ltd as soon as possible.

## 6) EXTRACT DUCTWORK

It is not possible to provide a general rule for the frequency of ductwork cleaning required because of the variation in hours of usage and level of contamination in the system. We recommend that a regular inspection is made and a risk assessment is made to determine the ongoing cleaning frequency. Further guidance is available in TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems published by the HVCA ([www.hvca.org.uk](http://www.hvca.org.uk)).

## 7) SERVICE DISTRIBUTION UNITS, CONDENSE CANOPIES AND WALL CLADDING.

These are normally made from 304-Grade stainless steel to customer's specific requirements. No maintenance is required apart from the need to keep clean by wiping over using a solution of hot water with a little mild detergent. **Do not use any caustic solutions.**

## 8) GAS AND ELECTRICAL INSTALLATIONS

The inspection and testing of these should be included in the planned maintenance programme for the full catering facility to comply with the appropriate regulations.

## FREQUENCY OF CLEANING.

The need for specialist cleaning of extraction systems will depend on the level of usage of the cooking equipment, types and quantity of cooking and other risk factors such as vulnerability of the system to ignition and of the building and its occupant / users to system fire, hygiene, vermin and mechanical hazards. Typical cleaning intervals are shown below

**Table 1: Typical Cleaning Frequencies for Extraction System Components at Different Usage Levels**

<b>SYSTEM COMPONENT</b>	<b>LIGHT USAGE 2-6 Hours per day</b>	<b>MEDIUM USAGE 6-12 Hours per day</b>	<b>HEAVY USAGE 12-16 Hours per day</b>
<b>CANOPY</b> (clean accessible internal and external surfaces and check collection trays)	Every 2-3 weeks	Weekly	Twice weekly
<b>GREASE FILTERS</b> (clean)	Weekly	Twice Weekly	Daily
<b>ODOUR CONTROL SYSTEMS</b> (check and replace as necessary)	12 monthly	6 monthly	3 Monthly
<b>FANS</b> (check and clean as necessary)	12 monthly	6 monthly	3 Monthly
<b>FRESH AIR FILTERS</b> (check and clean as necessary)	6 monthly	4 monthly	3 Monthly
<b>EXTRACT DUCTWORK</b> (check and clean as necessary)	12 monthly	8 monthly	6 Monthly

Systems with heavy usage of chargrills, salamander grills and chinese cookers may need to be cleaned even more frequently.

Please refer to TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems (HVCA [www.hvca.org.uk](http://www.hvca.org.uk)) for more information.